North American IT Trend Forecast

First Quarter 2008

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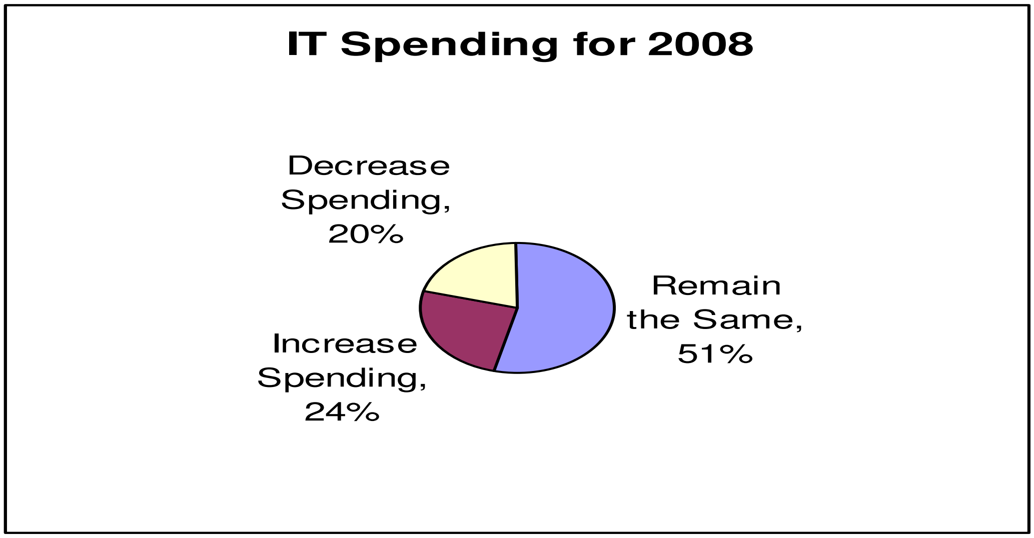
Executive Summary

Overall spending outlook

There are many mixed feelings regarding technology spending by organizations in 2008. Going into the new year, many customers are looking to hold down their technology spending according to a recent survey from ChangeWave Research. In addition, this report found that 24 percent of respondents said their organizations planned to increase IT spending in the first quarter of 2008. An additional 20 percent said spending will drop or be nonexistent, up 3 percentage points from ChangeWave's last study in August. Furthermore, another 51 percent said that spending will remain the same.



Overall, there is a murky corporate IT spending environment. With the possibility of a future economic slowdown and general uncertainty of what 2008 could bring, the federal government has cut interest rates to ease the credit crunch; and when credit tightens, the first thing that will take a hit within organizations is capital spending and IT spending.

As the economy goes, so goes spending across the board, and that includes IT spending. What is being noticed among organizations is a softening in revenues. Organizations are not looking to scale back IT, they are just not going to grow by as much as in the past, when increases each year were much higher. Goldman Sachs' early look at 2008 IT spending is less than comforting. Despite healthy growth on new computer equipment and software in the third and fourth quarter of 2007, IT spending in 2008 could fall by at least 1 percent compared with 2007. Ultimately, macro concerns may cap IT spending within organizations. Although, technology vendors' revenues could increase by as much as 9 percent in 2008, this is only modestly better than 2007's projected 8 percent growth for 2008. The uninspiring 2008 outlook centers mainly on the broader economy though. By contrast, revenues had grown by 10 percent in each of the two previous years and by 13 percent in 2004.

Not everyone is feeling bearish on their budgets, but as companies come to terms with debt losses, they may be tempted to curtail spending on new technologies. A definite trend for 2008 will be to cut spending on maintaining older technologies in order to make room for new projects. There seems to be an overwhelming interest within organizations for projects that can free up budgets.

As for software companies, a pullback could translate into slower growth in sales of new licenses, which is a predictor of future revenue. Furthermore, corporate demand for PCs could also be slowing. At least that is the tale of two recent reports on IT spending in the U.S. As IT spending lags behind overall corporate revenue growth, the long running trend of spending a greater percentage on software than on hardware continues. IDC reports that total software spending could increase 9 percent this year. IDC further notes that strong software sales and declining storage revenues are indicative of a larger trend. Broadly speaking, there has been a long-term trend towards better profit margins in software versus hardware, hence the strategy for many IT hardware vendors is to focus more on software for future growth. IT capital spending is shifting to software, with hardware declining as a percentage of IT budgets for more than a decade. Thus this trend of the past few years is no surprise; however, neither hardware nor software account for most of the IT spending. The largest single line item for IT budgets in organizations is IT personnel.

As for where organizations will be shifting their priorities for 2008, look for an alignment of technology with business, while dealing with the pressures of space and power in the data center, as well as addressing green issues. Security is now so critical that it automatically figures near the top of every CIO’s agenda. For 2008, companies will be most successful if IT is strongly aligned with the business it supports. Companies must migrate to an agile architecture if they are to bring products to the market that will have a meaningful impact on earnings and revenues, and migrating to a Service Oriented Architecture (SOA) may be the only way to accomplish this initiative. This is in line with preliminary findings on 2008 priorities by Gartner, which shows that CIO’s are looking to focus on aligning IT with growth and innovation. It is going to be important to demonstrate to managers the value that IT investments bring to the business, as well as ensuring that IT is agile enough to support changing business needs. In the context of infrastructure, standardization, virtualization, and automation will deliver on investments. Furthermore, in applications, enterprise architecture, SOA, potentially Web 2.0 and collaboration will deliver on investments as well. However, for virtualization optimization, businesses will need to invest in a secure and robust IT infrastructure. As the virtualization market continues to mature, yielding flexible and cost effective solutions, it will become less of a differentiator and more of a commodity.

CIO Agenda for 2008:
1. Business alignment and strategy
2. Hiring and retaining staff
3. Security
4. IT innovation/ new methodologies
5. Collaboration technologies
6. Controlling costs
7. Compliance and regulation
8. Virtualization
9. Customer service
10. Mobility
11. Green issues

With most organizations being on an annual budget cycle, the first quarter of 2008 may observe larger, capital-intensive, more strategic projects being launched since budgets have been approved and funds are now available. Although these expenditures will be entered into cautiously, using those allocated budgets more wisely. As previously mentioned, security will be a hot spot for 2008, as it is a non-discretionary item. Companies will continue to invest in security throughout 2008 as they seek to address and grapple with audit, compliance, and privacy issues. It is clear that regulatory compliance is driving growth in IT budgets. So, areas such as aforementioned security, in addition to business continuity and disaster recovery are receiving funds as a result of companies trying to protect themselves. Organizations will need to take on cost-containment projects to make their budget ends meet. They will look at deploying projects that can produce a positive return on investment.

Regardless, there will still be positive, yet moderate, growth in 2008, but the industry will definitely be pinched a little in the coming year, with companies being extremely cautious about spending all of their approved budgets for the year. IT spending will grow more slowly in 2008 than in 2007, with economic uncertainties taking a toll in the U.S. in particular. Worldwide, spending is projected at 5.5 to 6 percent in the new year, down from 6.9 percent growth in 2007. This drop is rather significant, and U.S. IT spending could be hit especially hard, dropping from 6.6 percent in 2007 to 3 or 4 percent in 2008. The first effect of the slowdown, as previously mentioned, will be felt in hardware, with software lagging a quarter or two behind, followed by a more gradual effect on services. For now, investors may need to wait for more data. If anything goes seriously wrong within the computer-industry results, curtailed spending in the financial-services sector could be an early warning. Recommendations for 2008 are to create two separate budget plans. The first should reflect the same kind of marginal growth prepared during the past six years, and the second budget should assume the need to cut costs in response to the arrival of a possible recession.

Business Drivers and 2007 Trends

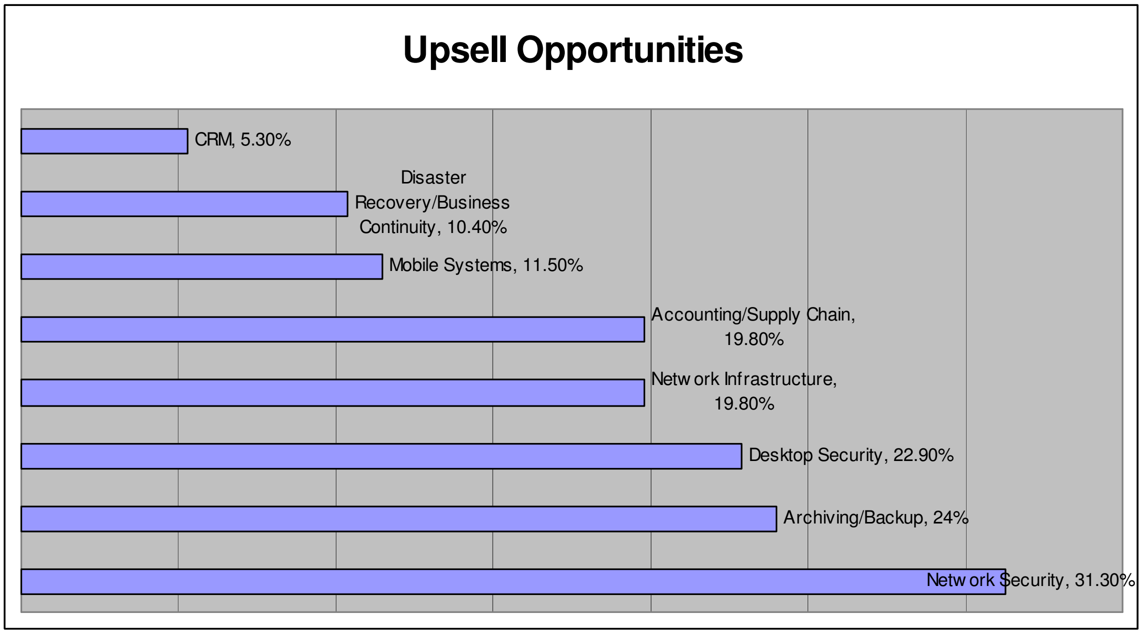
Drivers for IT Spending

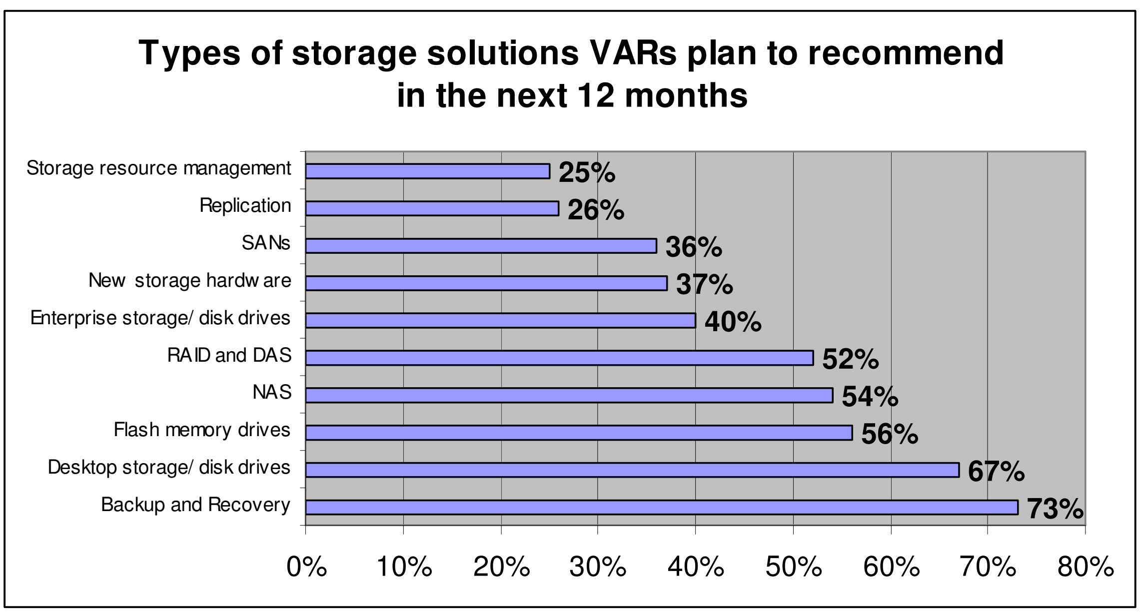
- Regulatory Compliance
- Globalization

Spending Trends to Look For in 2007

- Upgrading legacy systems
- Hardware
- Virtualization
- Security

IT Purchasing Trends - Hardware Categories
Top 10 Products/Technologies
Products/technologies solution providers plan to sell or recommend to their business clients over the next 90 days. Percentage of solution providers citing each (from CRN survey of solution providers).





Industry Growth/Contraction Trends
Highlights for Arrow Industries of Focus

Manufacturing

Early 2008 will see a measured continuation of many of the same feelings, trends, and spending plans that have previously played out in US companies over then last year, with sober expectations for the economy and the business of manufacturing. The one big shift is in the attitude toward cost reduction. U.S. manufacturers' confidence in the domestic economy as they head into 2008 has dropped 14 points compared with last year, as the heat from the credit and housing crisis begins to be felt by a noticeable number of companies.

Key areas of Spending

- Product Lifecycle Management Software
- ERP Software
- Business Intelligence
- Manufacturing Intelligence
- Radio Frequency Identification
- Wireless technologies

(For more information, refer to page 20)

Government

The top spending groups within Government are federal, at 8.1 percent, and state governments, at 8.2 percent, which have significant infrastructures to maintain, including social program, tax collection, records administration, military operations, and other IT-intensive elements. Federal information technology spending will continue to grow over the next five years, but at a much lower rate than during the past five years. A study that has recently been released by the Government Electronics and Information Association (GEIA), predicts that federal IT budgets will increase by an average of 1.4 percent per year from 2008 through fiscal 2013.

Key Areas for Spending

- Security
- System Consolidation
- Legacy system maintenance

(For more information, refer to page 23)

Financial Services

In a recent survey, most industry sectors said that IT spending will increase 5 to 8 percent in the coming year with 43 percent of the IT budget being allocated towards new purchases, and a greater emphasis on IT governance. Security spending is up as much as 15 percent over last year, at 11 percent. Customer-oriented innovations are also driving an increase in IT spending by financial services firms, a recent study into the industry's technology trends has revealed.

Key areas of Spending

- Service Oriented Architecture
- Customer Relationship Management
- Security
- Business Process Management
- Business Intelligence

(For more information, refer to page 24)

Healthcare/Life Sciences

Within the healthcare sector, healthcare providers are projected to spend as much as $27 billion on Information Technology in 2008. With major employers, providers, payers, IT companies, and associations making announcements of personal health record, or PHR, initiatives, it is no surprise that this will be the most important trend of 2008. A very distant second is the trend of tentative steps toward personalized medicine, such as the one spearheaded by the Mayo Clinic. Additionally, advances in e-prescribing ranked third, followed by RFID applications to battle against counterfeit drugs in fourth place.

Key areas of Spending

- Federal e-health initiative
- Personal Health Records
- Security
- Federated Identity Management
- Storage

(For more information, refer to page 27)

Industry Growth/Contraction Trends - Business Segmentation

Enterprise Businesses (1000+ employees)

Segments with potential for growth are:

- Internet-related categories
    - Wireless
    - Web services
    - Application and database development
    - Security
- Hardware/software categories
    - Networking
    - Desktops
    - PC servers
    - ERP
    - CRM

Mid Size Businesses (100-999 employees)
Segments with potential for growth are:

- Internet-related categories
  - Web services
  - Wireless
  - Supply Chain Management
  - CRM
- Hardware/software categories
  - PCs
  - Servers
  - Networking hardware
  - Storage
  - ERP
  - CRM

Small Business Spending (Under 100 employees)
Segments with potential for growth are:

- Internet Categories
  - Security
  - Web Services
- Hardware and Software Categories
  - Notebook PCs
  - Application Development
  - Storage
  - ERP
  - CRM

(For more information, refer to page 31)

Business Drivers and 2007 Trends to Look For

Business Drivers surrounding forecasted increased IT spending

Initiatives include:

- Regulatory Compliance
- Security

Regulatory Compliance

The increased number of compliance regulations, such as HIPPA, and SOX, as well as the new state laws on data security breaches, is giving opportunity to providers. Meeting compliance regulations means having a “best practice” policy in place, but satisfying regulations can be challenging because the laws are vague and don’t specifically define what a best practice policy is.

Making compliance even more complicated are new laws from different states, each with unique regulations. There are currently more than 20 states that have enacted security breech laws as of 2006 with more states laws going into effect by the end of the year. Because of these laws, companies must notify customers when their private information has been compromised or lost. Vendors are now offering a variety of solutions to help partners and their customers keep up with evolving regulations.

Many private companies are now looking to be more compliant with SOX and will be spending money to ensure compliance. Many public companies that are already compliant are now looking for ways to streamline compliance and eliminate some of the costs associated with being compliant.

Much of the compliance technology spending in 2008 will revolve around risk management and improvement of the control environment and compliance process. Technology vendors could be positioning themselves to capitalize on any increase in SOX spending, demonstrating how their technology supports compliance as well as other organizational needs. Importantly, vendors can also demonstrate how their technology can automate compliance processes and, at the same time, lower the overall costs of compliance. At a minimum, technology vendors should prepare to accommodate and increase spending on SOX in 2007, and they should not overlook small and or private companies that may have SOX concerns.

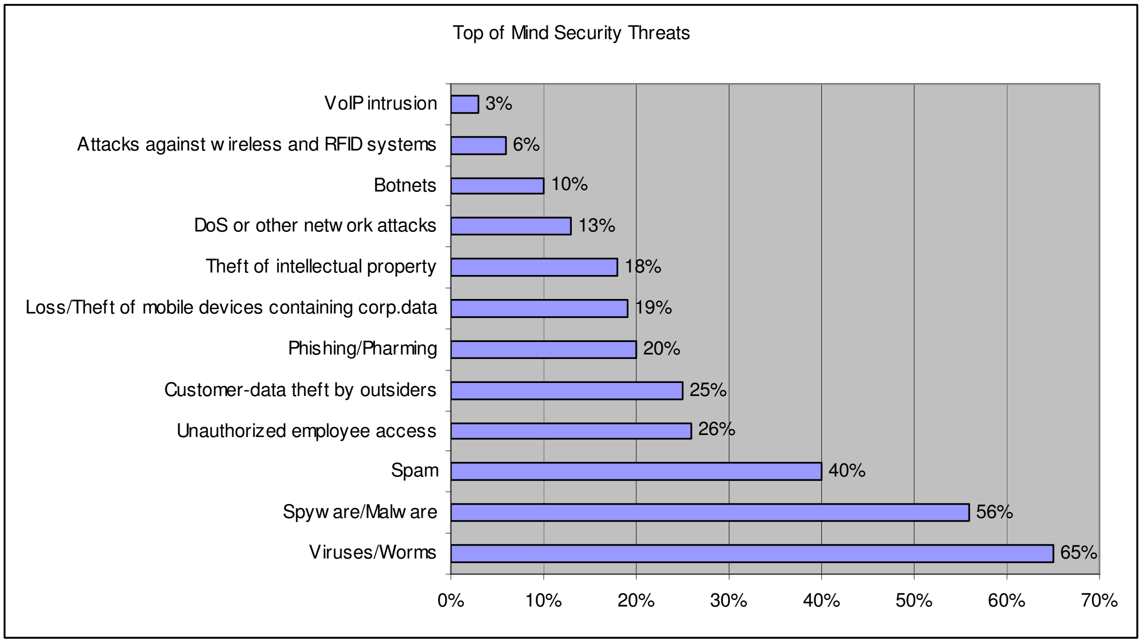
According to Gartner’s tech trends predictions for 2007, the influence of regulatory compliance needs is expected to continue to increase and is predicted to cut into discretionary IT budgets all the way through 2008. Compliance spending according to Gartner is currently growing twice as fast as discretionary budgets and that trend is expected to continue. (Gartner predicts trends for 2008)

The cost of complying specifically with SOX governance regulations has dropped 23 percent for large companies, down to around $2.9 million. This is the second large decline in a row, according to a survey by Financial Executives International. Most of the cost savings have come from a 10 percent cut in internal hours and fees paid to outside lawyers and consultants. Regardless, after some highly publicized data breaches that have occurred, with TJX for instance, there is still a huge need for compliance improvements. Both Payment Card Industry (PCI) and SOX focus on the integrity of the data and the processing infrastructure. Neither requires much in the way of data leakage detection, so to avoid being the next TJX, they have provided a few steps to consider for protecting continuity, data, and consumers, not to mention the vendor benefit for the adoption if these practices which include:

- Using virtualization and application delivery to keep sensitive data in the data center. A major security benefit of virtualization is that IT can keep application execution and sensitive data within the data center where it can be controlled.
- Expand data leakage protection to cover databases, file shares, email, and portals. Use technology and processes to check for inappropriate access behavior.
- Exceed PCI requirements and archive data for five years. A company never wants to be in a position of not being able to determine the extent of the breach, in the case of TJX, their breach had been going on for years completely undetected. So keep all data around for five years, in addition to encrypting the data.
- Control endpoint use of applications, removable storage device, and especially USBs
- Clean sensitive data off endpoints after a SSL session. Use the capability of SSL VPN clients to transparently erase temporary storage.

Security

Currently, spending on security technology, training, assessments, and certification now accounts for one-fifth of total IT budgets, according to research from the Computing Technology Industry Association. Organizations also expect to increase spending across all areas related to security in 2008. Nearly one-half of respondents in a recent survey said that they intend to increase spending on security-related technologies; and one-third of respondents expect to increase spending on security training. Among those expecting to increase spending, the average increase will range from 19-23 percent, regardless of the area. Antivirus software, firewalls, and proxy servers continue to be the top technologies for security enforcement, utilized by nearly all organizations. The past few years have seen a significant increase in the use of multiple security enforcement technologies to combat attacks, including firewalls, proxy servers, intrusion detection systems, physical access control, multi-factor authentication, and other technologies. Although, a very distinct trend shows that security is moving away from a reactive discipline to various technological threats, towards a more rational process of being able to proactively manage risk. This shift points to a regulatory environment as the trigger. Unlike most markets, the security market in not driven solely by customer demand and vendor profit. It is also driven by innovation- especially the innovation of cyber criminals. As a result, the security market will therefore remain, for the foreseeable future, in a steady, consolidating state. IDC predicts the market for security products and services will reach $66.6 billion by 2010.

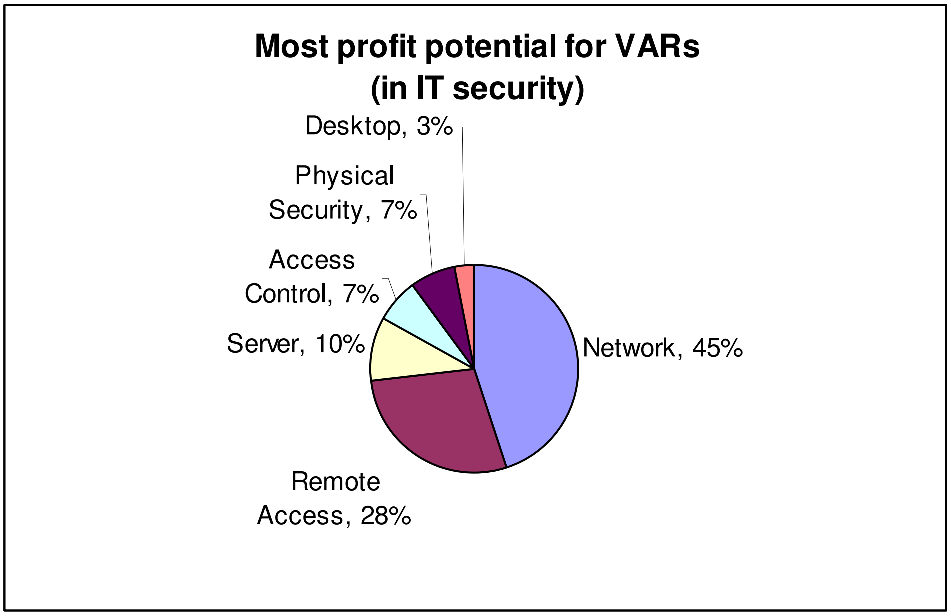


A new study by Gartner estimates that data breaches are set to cost businesses 20 percent more each year through 2009. With cyber criminals becoming increasingly sophisticated, such as using the credentials of legitimate users to sneak into secure systems for instance, organizations will remain especially vigilant. Gartner reports that a recent study indicated that 90 percent of targeted attacks could be avoided without an increase in firms' security budgets, and also said that the investments that enterprises had made in intrusion prevention, vulnerability management, and network access control had largely paid off. CIO's should be advised to make sure that security will be a top requirement for every new application, process, and product that they are looking to adopt. In addition, it is recommended that businesses establish security metrics to be able to measure spending efficiency.

For 2008, the predictions are varied over which will be the biggest security threats to organizations this year. For the most part, the top 10 security threats to be aware of are going to be as follows:

- VoIP Attacks
- Professional Attack Toolkits
- Virtualization
- Online Gaming
- Vista
- The Storm Worm
- Pump and Dump combined with Denial of Service attacks
- Social Networking Sites
- Online Applications
- Phishing

As previously mentioned, attackers are becoming far more sophisticated and to maximize their chances of success, they will try to reach a larger number of devices and computers via newer attack vectors that are not already widespread and well known. The Georgia Tech Information Security Center (GTISC) predicts that we will see an increase and maturation of five cyber threats in 2008. These threats are: Web 2.0 and Client-Side attacks, targeted message attacks, botnets, threats targeting mobile convergence, and threats to RFID systems.



Data security is not only critical for operations, but it is also required to be compliant with several federal regulations. Encryption will also remain a crucial facet of security for some time to come. Although, just because a vendor incorporates encryption into its products does not mean it is doing so securely. Fortunately, an upcoming federal standard introduces tighter key management and updates testing for software modules and physical protection, offering guidance for government agencies handling sensitive data and also providing a useful benchmark for the private sector. Security settings run the gamut from generalized frameworks to fairly precise, quantifiable measures. The current Federal Information Processing Standard 140-2 and the upcoming FIPS 140-3, fall into the precise group, specifying technical requirements for certifying cryptographic software and hardware modules. All four levels of compliance under FIPS 140-2 must use approved algorithms and modes for those algorithms, meet requirements for key management and certain power-up tests, and include appropriate documentation. The FIPS 140-3 revision is not only going to assist the federal agencies, but will also benefit businesses with securing their data. HP, for example, has unveiled a centralized security appliance aimed at improving privacy compliance and cutting the risk of data theft. The HP StorageWorks Secure Key Manager is a secure central location for encryption key management across the enterprise. The appliance will be expanded to work with disk arrays and storage switches over time as encryption spreads to those devices. The Secure Key Manager is a hardened appliance for the FIPS 140-2, and is expected to be certified to that standard in the next nine months.

Spending Trends to Look For in 2007

- Enterprise Software
- Hardware
- Network
- Security

IT Purchasing Trends - Hardware Categories

Hot Growth Categories

Predictions of hardware spending going into the new year are varied. There is definitely a push for software purchases, as opposed to replacing operating systems in an attempt to keep spending costs down, with a possible recession in the near future. However, this feeling is not across the board. Some main drivers for hardware purchases this year will include server consolidation, virtualization, and power savings. Hardware is forecasted to comprise of an estimated 38 percent of the overall server budget in 2008. Fortune 1000 organizations will continue to increase their hardware spending as users acquire new servers to host virtualization and look to multi-core processors to improve density and performance, to ensure the best possible virtualization base. Customers are planning to switch vendors for a variety of reasons, including x86 and a move from proprietary hardware and UNIX to alternate systems, which will further decrease those customers running costly UNIX systems.

Data center costs will play a crucial role in purchasing this year. Understanding trends in data center costs will be key to managing data center spending. Blade server sales are expected to explode in the coming months, with server consolidation, virtualization, and power saving leading the boom in blade server sales over the next four years. Solution providers are already taking advantage of the new blade servers to solve customer infrastructure issues. It is estimated that blade server shipments will reach 2.4 million units by 2011, up from 620,000 units sold in 2006 and this year’s 856,000 units, for an overall cumulative annual growth rate of 31.5 percent. This growth is further being driven by the aforementioned drivers, as well as the adoption of technologies such as multi-core and low-power processors. The boom in units shipped can also be attributed to the decrease in server costs through 2011, due to the constant evolution of the numerous solutions that are being released, all of which growing increasingly complex and customized toward specific markets. Sun Microsystems, for example, has seen blade server sales increase by five times in the fast couple of months, thanks in part to the introduction of its Sun Blade 6000 family. IBM blade servers are also growing fast, especially as customers look to consolidate more servers into fewer boxes with VMware server virtualization.

Solution providers say blade servers sales to SMB accounts may have finally reached the tipping point led by an out-of-the-gate flurry over HP’s new BladeSystem c3000 blade chassis and a renewed push by IBM into the midmarket. HP’s introduction of a smaller version of its BladeSystem c7000 puts HP in a prime location to capitalize on the lucrative SMB segment, with a large portion of SMBs looking to expand through technology this year. The reason that the BladeSystem c3000 is selling so well is that is they do not have the same power requirements that the other blades do. They use a normal three-prong that goes right into a wall. Blade systems that use standard power represent a breakthrough in cracking the SMB market. In addition, the form factor dictates the power because you can load the HP c7000 BladeSystem up so much, for example, but you would need three-phase power just to do the redundant operations. The push into the midmarket with the new blade systems opens up a new front in the blade server market share battle between HP and IBM. Solution providers are saying that market share numbers in the future could tip toward HP due to HP’s strength among SMB VARs. Now that blade technology is a legitimate solution for SMB customers, the c3000 is positioned very well, and is also at a price point that makes it more affordable for smaller organizations. With the introduction of the c3000, HP has lowered the bar for entry into this solution area for the end user, so now there is more opportunity to sell to a larger number of end-users via VARs.

In an attempt to expand their server line, Sun Microsystems has introduced a new series based on its new UltraSPARC T2 processors. In addition to the new processors, the servers also feature a new Sun chip with eight floating point units compared to only one in the previous generation of the server family. The extra floating point operations are for financial institutions running Monte Carlo simulations, or whenever customers run security applications such as encryption. The SPARC Enterprise T5120 packs a single processor socked for either a four-, six-, or eight-core processor, as well as up to four hot-plug SAS hard drives, up to 64 Gbytes of memory, and three open I/O slots, all in a 1U enclosure. The SPARC Enterprise T5220 is similar, but its 2U enclosure has two extra I/O slots and room for four more hard drives. The third server is the Sun Blade T6320, a blade version of the T5120. All three include Sun's integrated lights-out management for monitoring networking, security, and authentication, which is found on all Sun's servers. They are starting to drive to common packaging and management wherever possible. Sun is also including a tool that will let customers who have not yet ported all their Solaris 8 applications to Solaris 10, run those applications in a virtual Solaris 10 container. This new line of servers could also be a way to introduce new customers to the Sun platform._Furthermore, Sun is using the same basic server packaging for its Xeon and UltraSPARC servers to help expand the market, and open a door into non-traditional server environments.

Hitachi Data Systems has recently released a new enterprise product, with its Hitachi Ultrastar A7K1000. They are reacting to market interest in robust SATA drives with the release of the Ultrastar A7K1000 1-Tbyte hard drive. Hitachi's 1-Tbyte Ultrastar is similar in specifications to the corporate desktop Desktar 7K1000 SATA drive. Like all SATA drives, the A7K1000 has an access speed of 3 Gbps. The drive can access data at 300 MBps with its burst data rate. The A7K1000 is capable of performing at the same rate even on multidrive systems. The Ultrastar drives come with the same physical connectors as SAS drives, so the system builders can place the Ultrastar in mixed drive systems. Two important enterprise features that come with the drive are a rotational vibration safeguard and an unload ramp that protects data when power is removed. The drive also has a throttling protection system that keeps track of I/O to maximize data transfer reliability.

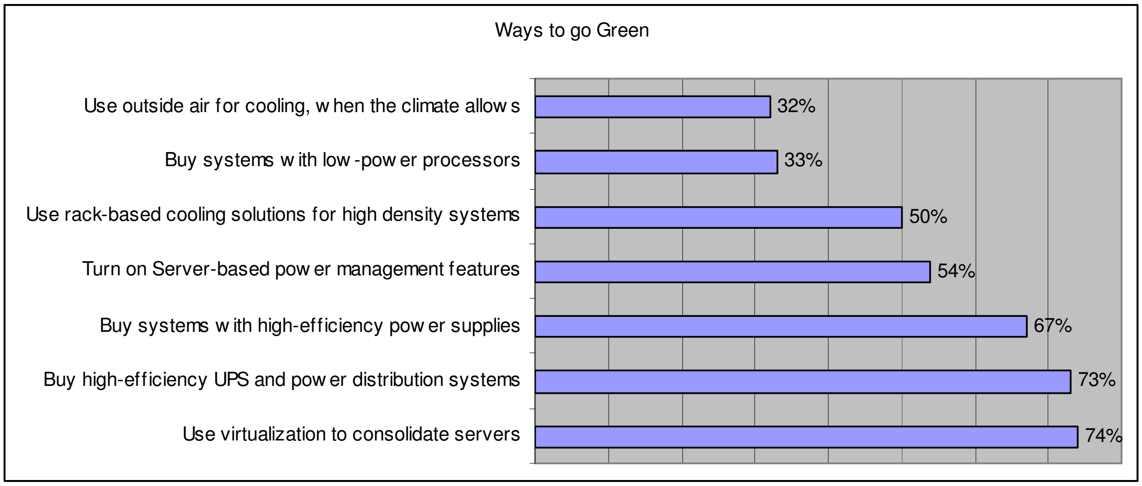
In a recent IDC report, they revealed that IBM holds the number one position in worldwide server revenue share, with 30 percent factory revenue share in 2007. A good chunk of that revenue share is attributed to the industry growth of UNIX servers, which represents 31.1 percent of quarterly server revenue, of which IBM snagged a 31.9 percent revenue share. IDC further noted that IBM might continue to lose some market share due to weaknesses in the System z and System I, but IDC attributes most of the hit to System z. Overall, IDC pegged server growth at .5 percent, up to $13.1 billion. Despite growth in Windows servers, Linux servers, and Unix servers, revenue for midrange enterprise servers declined 2.2 percent year over year, marking the third consecutive quarterly decrease in that segment. Although demand for x86, Blades, and UNIX systems remain strong, other parts of the market are beginning to cool. Concerns about the economy are causing customers to re-think their infrastructure needs at the same time that new levels of computing and power densities are expanding power and cooling challenges and driving different IT infrastructure acquisition patterns in the market. Server blades remain the fastest-growing segment and for the first time is accounting for more than 10 percent of all servers shipped. The competitive space will only prove to become more interesting as vendors

continue to roll out new blade initiatives, including virtual I/O solutions and chassis targeted to small-medium business sites.
IBM recently announced that for the first time, they will be putting a Power6 processor into a blade server. They also have announced the availability of new virtualization software for moving running applications and OS partitions from server to server to theoretically eliminate blocks of planned downtime. The computing giant built the new BladeCenter JS22 Express server for AIX around two dual-core Power6 processors with APV. The JS22 Express is now available with 4GB of memory, a 73 GB hard disk and BladeCenter chassis. By comparison, IBM's single rack of virtualized Power6-based blades can keep pace with 23 non-virtualized racks of Sun's V490 servers. By IBM's calculations, migrations from the Sun array to the new IBM blades could mean potentially saving more than $200,000 per year on energy costs alone. Of particular interest is the new software stack from IBM, with its core feature of virtualized workload and OS image migration from server to server, called Live Partition Migration and Live Application Mobility. This feature is receiving praise as this gives you real time functionality which can be used for mission critical applications.

A number of the leading SAN component vendors are expanding from their traditional comfort zones in order to take better advantage of future trends in the storage industry, resulting in new potential opportunities for their solution provider's partners that also wish to expand. Among these vendors are QLogic, which has wholeheartedly embraced high-performance computing; Brocade Communications Systems, which recently expanded beyond SAN switches and directors to enter the Fibre Channel host bus adapter business. The worldwide HPC market, including computer nodes, storage and services, is expected to grow by an average of 9.5 percent annually through 2010, reaching $22.92 billion this year, which is up from $16.34 billion. The HPC server business is expected to climb an average of 20.9 percent yearly over the next four years, compared with 4.9 percent for the server business alone. The growth of HPC servers will most likely benefit x86 servers running Linux, and will be driven by multicore technology, lower prices and less scalability for individual servers.

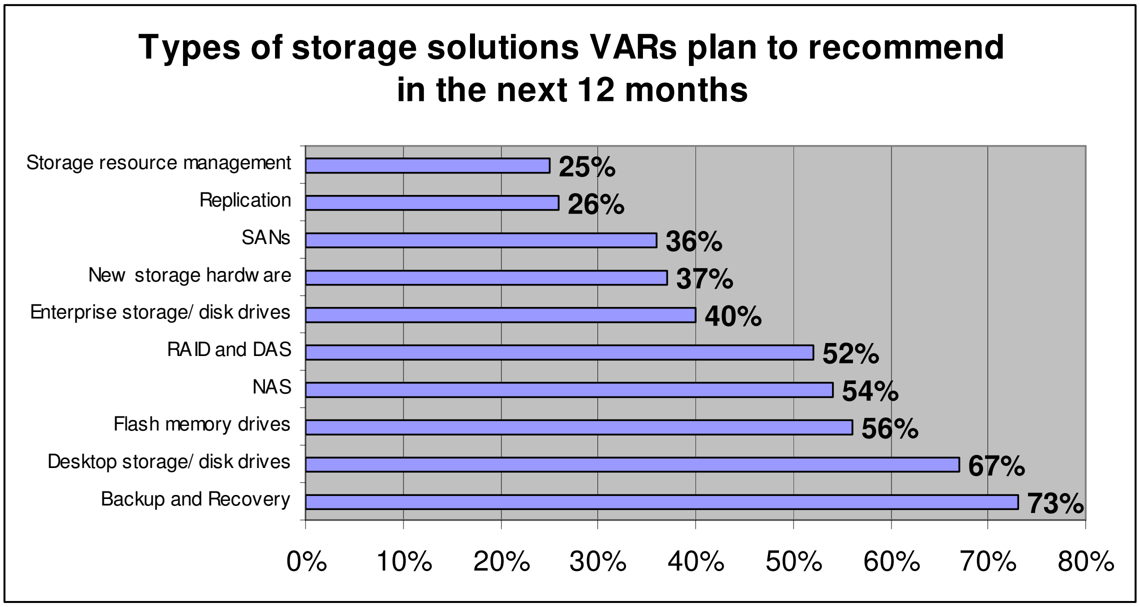
	2006	2007	2008	2009	2010	CAGR
Computer nodes	10.31B	11.42 B	12.42B	13.35 B	14.27 B	9.20%
Storage	3.85 B	4.37 B	4.86 B	5.34 B	5.7 B	11.10%
Services	2.18 B	2.39 B	2.57 B	2.76 B	2.9 B	8.30%
Total	16.34 B	18.17 B	19.85 B	21.48 B	22.92 B	9.50%

By far, the hottest emerging trend is that of "Green Computing." With 2 percent of all carbon-dioxide emissions coming from office equipment, solution providers have jumped on the band wagon to offer more eco-friendly equipment to their customers. Because it is a concept that has not yet become IT-specific, the one place where the green tech movement is taking hold is in the data centers. Data centers are notorious energy hogs, largely due to cooling costs. Hewlett-Packard, IBM, and Sun are all pledged to green initiatives, which range from more efficient chip technology to better data centers. IBM has even committed $1billion to its "Project Green Initiative," which is a system that will walk businesses through the process of going green. It is devoting more than 850 IBM "energy efficient architects" to the project and will work with six "ecosystems" partners, such as GE Consumer and Industrial. IBM is starting with its own data centers, and the company anticipates doubling computing capacity in the next three years without using more power or creating more carbon. According to Information Age, more businesses will enact more environmental policies, and by 2010, 50 percent of IT organizations will have some form of environmental targets they must meet. What this all boils down to is not only environmental activism, but primarily cost savings. The EPA reports that power consumption in data centers more than doubled from 2000 to 2005 and will double again by 2011, costing $7.4 billion annually, unless companies and government improve energy efficiency.

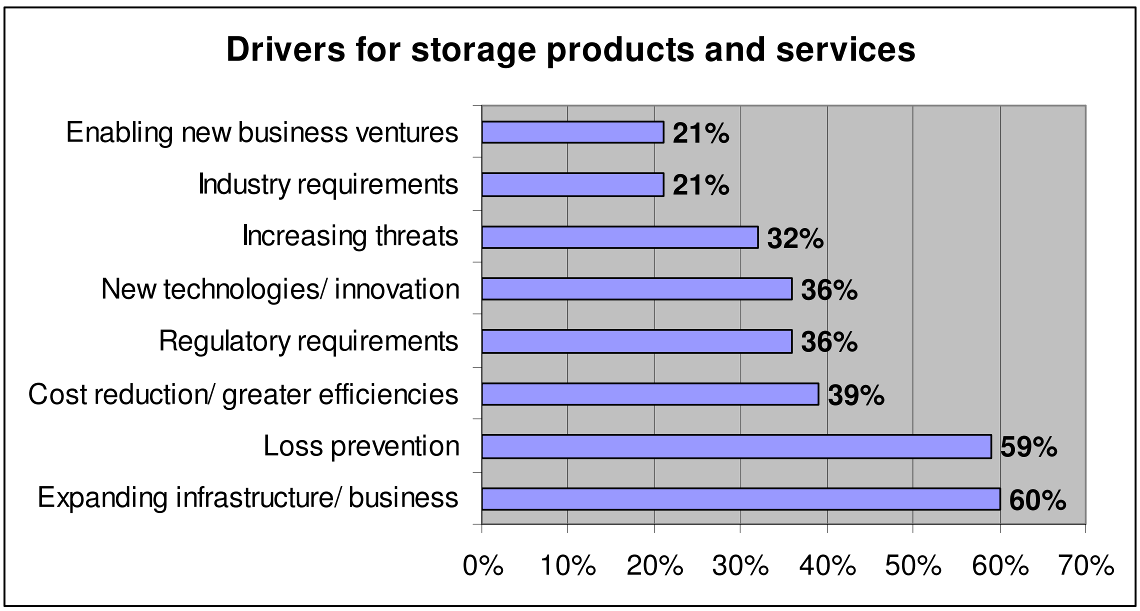


Solution Provider Recommendations to Business Customers (CRN,Spending Report)

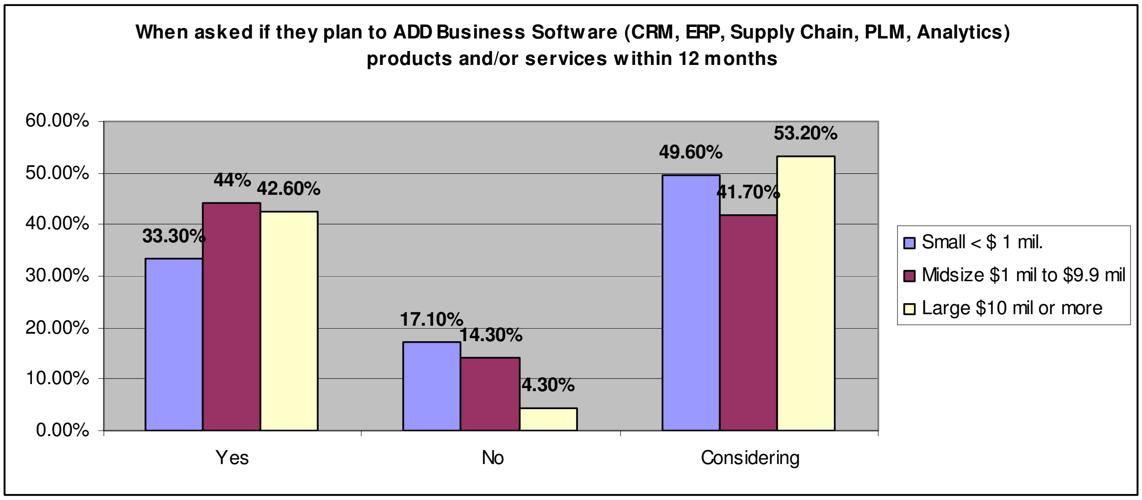
The list of the top products and technologies that solution providers plan to sell or recommend to their small and midsize business clients over the next three months continues to be dominated by three technology areas – security, networking hardware, and storage. Virtualization technology solutions will also be among top solution provider recommendations to customers as well. The trend in data consolidation across all verticals is overwhelming. Businesses of all kinds are looking to streamline their business processes and improve their operational efficiency, which will be attained by creating virtualized environments within the organizations.

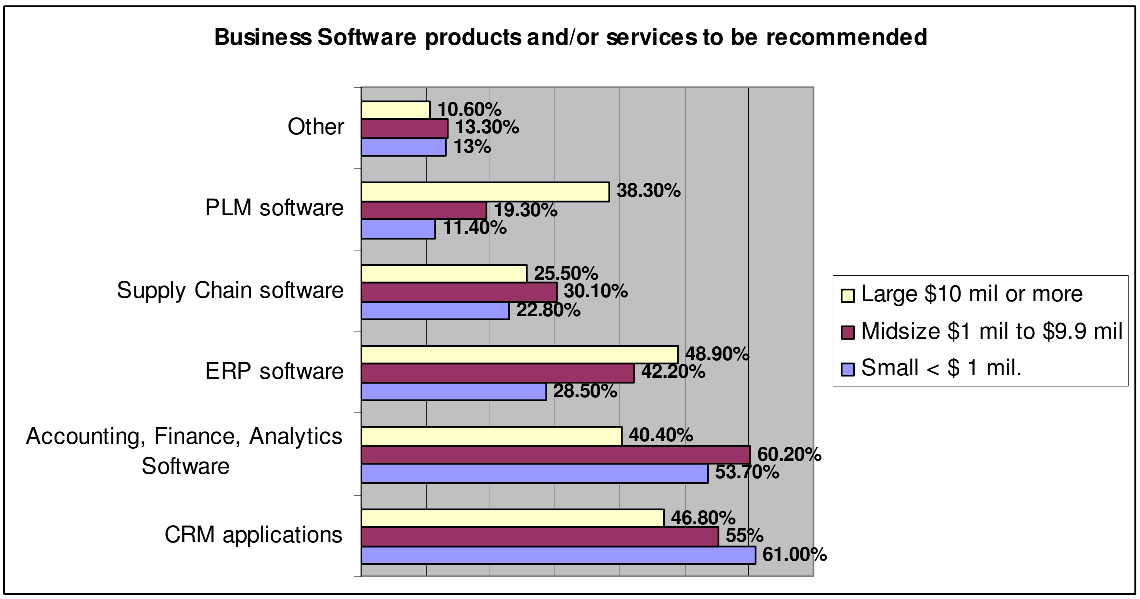


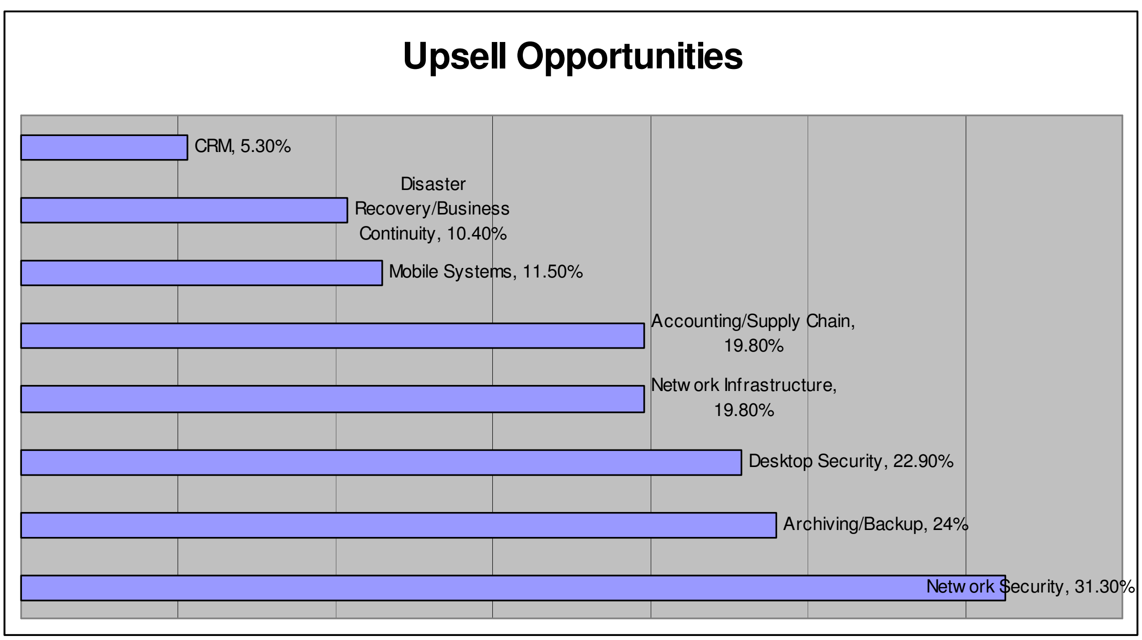
The biggest demand for storage products and services from customers is expanding infrastructure, especially for small to midsize VARs. The following illustration represents the biggest reasons that end users are turning to VARs for storage products and services:



As for the state of technology within Business Software, the following charts will illustrate the software's that will be purchased or are being considered among organizations:


When asked if they plan to ADD Business Software (CRM, ERP, Supply Chain, PLM, Analytics) products and/or services within 12 months
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
33.30%
44%
42.60%
17.10%
14.30%
4.30%
49.60%
41.70%
53.20%
Yes
No
Considering
Small < $ 1 mil.
Midsize $1 mil to $9.9 mil
Large $10 mil or more


Business Software products and/or services to be recommended
Other
10.60%
13.30%
13%
PLM software
38.30%
19.30%
11.40%
Supply Chain software
25.50%
30.10%
22.80%
ERP software
48.90%
42.20%
28.50%
Accounting, Finance, Analytics Software
40.40%
60.20%
53.70%
CRM applications
46.80%
55%
61.00%
Large $10 mil or more
Midsize $1 mil to $9.9 mil
Small < $ 1 mil.


Upsell Opportunities
CRM, 5.30%
Disaster Recovery/Business Continuity, 10.40%
Mobile Systems, 11.50%
Accounting/Supply Chain, 19.80%
Network Infrastructure, 19.80%
Desktop Security, 22.90%
Archiving/Backup, 24%
Network Security, 31.30%

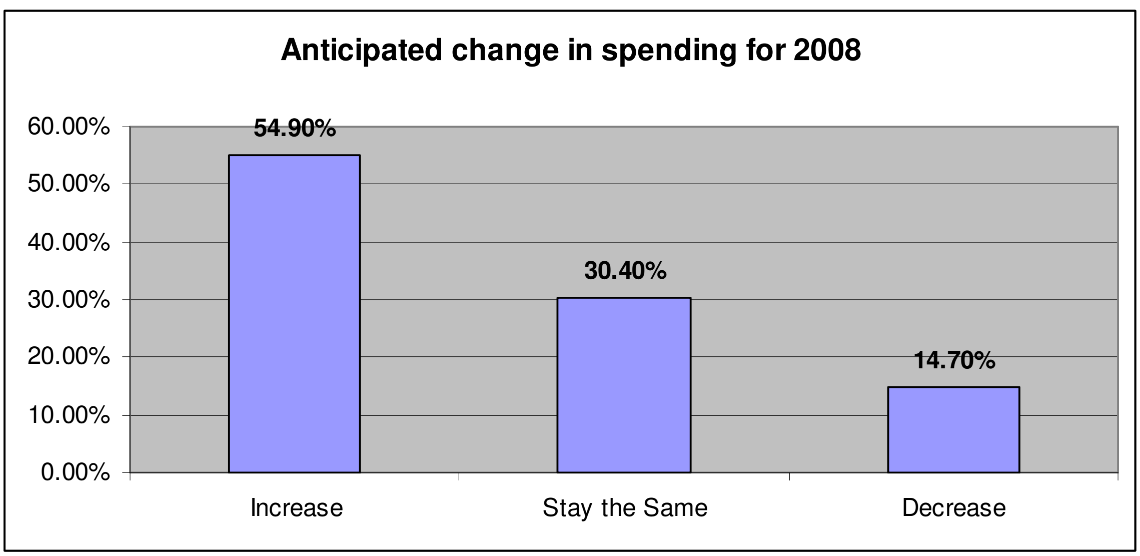
Industry Growth/Contraction Trends

Arrow Focus Industry Highlights

This data is mostly taken from American data. Some of this data can be related to all of North America with the exception of government and healthcare, which is very specific to US.

Manufacturing

Early 2008 will see a measured continuation of many of the same feelings, trends, and spending plans that have previously played out in US companies over then last year, with sober expectations for the economy and the business of manufacturing. The one big shift is in the attitude toward cost reduction. Long at the top of manufacturers' agendas, and particularly in force in the last few years during and after the recession, cost reduction has lessened in intensity as a business discipline for manufacturers. Cost reduction appears to have given way to a renewed focus on factors that drive growth, including getting into new geographic and industry markets and ratcheting up the pace of new product introductions. This year, the emphasis is on agility and continues to be a consistent force throughout manufacturing. Manufacturers' confidence in their own business prospects somewhat mirrors their feelings about the economy. U.S. manufacturers' confidence in the domestic economy as they head into 2008 has dropped 14 points compared with last year, as the heat from the credit and housing crisis begins to be felt by a noticeable number of companies. The status of technology budgets, meanwhile, fared somewhat better than feelings about the economy's prospects in 2008. This year, a majority of survey respondents, 54.9 percent, indicated that their company's technology budget would increase, compared with 57 percent last year. And those manufacturers that are expecting their budgets to be pretty much at the same level year over year came in about two points higher than last year, at 30.4 percent.



Wireless technologies, business and manufacturing intelligence software, e-commerce technologies, radio frequency identification technology, enterprise resource planning applications, and product lifecycle management applications continue to be at the top of purchase and evaluation lists for manufacturing information officers. Even though cost reduction continues to top business priorities, the margin of its dominance over other priorities has narrowed noticeably. Other key priorities for manufacturers include new market penetration, new product introductions, business model transformation and improving key business processes, with an increased focus on becoming more agile.

As manufacturers move ahead with strategic innovation initiatives, many are beginning to see product life cycle applications as part of the must-have technology cache that includes enterprise resource planning and supply chain management applications. PLM encompasses much more than design programs aimed at engineers. Applications now include sourcing and product portfolio management capabilities. Integration with applications such as ERP and manufacturing execution systems (MESs) has impressed PLM's importance on higher-level managers who are looking to tackle the ever-present project silos throughout an enterprise. The PLM market is now recognized as a major enterprise-solution investment for user companies. Industries that have not traditionally invested in PLM are becoming more aware of its potential value and demanding solutions that address their needs. Large and complex global companies that depend on product innovation must contend with R&D and product development efforts that often underachieve on expectations, with the average failure rate of new products currently hovering around 45 percent, and with the food and beverage industry's even higher, at 76 percent. Product development is a very intensive business process requiring active collaboration between cross-functional teams. PLM applications, in turn, should enable collaboration by capturing and aggregating relevant project information among team members, while keeping top management informed on progress. The goal should be to move projects forward while bringing visibility to executives, which PLM can achieve.

Manufacturing companies that have achieved a level of maturity in implementing continuous improvement programs, such as lean and Six Sigma, are enjoying significantly higher growth rates and profitability than their non-lean counterparts, according to IDC. Companies with relatively mature lean processes recorded 68 percent faster revenue growth over the past 20 quarters that non-lean companies. At the same time, lean manufacturers enjoyed net profit margins that averaged 26 percent higher than profit margins of manufacturers that have not pursued lean practices. Manufacturing Insights predicted that lean manufacturing in its index, for the immediate future, will continue to enjoy revenue growth rates that are at least 50 percent greater than non-lean manufacturers in that index. Furthermore, there is a growing trend by US-based multinational manufacturers to establish offshore manufacturing affiliates, often in fast-growing economies such as India and China. This is helping to lower product costs to consumers. Globalization increases income and profits to US multinationals and stimulates demand for products and services from US companies. While globalization sometimes results in lower-cost offshore manufacturing replacing US jobs, reducing production through cheaper labor is not the driver behind most globalization by multinationals. Instead, most manufacturers expanding their operations offshore are looking to increase revenue by opening new markets. Globalization also allows multinationals to reduce risks posed by such factors such as disasters, labor unrest, and regional economic downturns. In addition, globalization helps create competitive pressure on firms that leads to a higher standard of living in the US.

Radio Frequency Identification technologies will comprise a large opportunity for growth within the market. New analysis from Frost & Sullivan reveals that this market is estimated to reach around $6.3 billion in 2008, this is nearly triple the RFID revenues that were seen in 2005. Venture capitalists and the investment community at large are upbeat about the imminent launch of the five-cent tag in 2008. These tags will be a tremendous revenue-generator since they are expected to cover specific product lines that have high volumes, rather than being generic RFID tags. U.S. spending on RFID is likely to grow by a 120 percent by fiscal year 2009, with applications such as postage stamps, smart tickets and bar codes being the primary users of the five-cent tags. Industry experts expect the market for item-level tagging to exceed 500 billion by 2012, setting the stage for large-scale venture capital funding. Venture capital activity is likely to heat up until 2010, since this is when the emerging RFID market is expected to burgeon. Therefore, investment companies and venture capitalists that enter the market at this time will have an early-mover advantage and garner considerable profits from this highly lucrative and promising technology. In addition, the falling prices of RFID equipment, growing industry support to RFID-based supply chain management applications, and increasing end-user awareness is expected to catalyze exponential revenue growth.

Hewlett-Packard has also unveiled a collection of system management software components and services that can help manufacturing and distribution users of SAPs applications to test, change, and monitor enterprise systems and the underlying business processes they support. The system is called HP Manufacturing and Distribution Industries Business Services Management (MDI BSM). This application integrates with SAP supply chain management, ERP, and other applications, and with SAPs Solution Manager tool, a 6-year old lifecycle management software product for automating application patches, upgrades, and monitoring system performance. HP's offer extends Solution Manager's capabilities by allowing users to easily establish and monitor business process service levels, understand the impact of IT changes and breakdowns, and head off IT performance problems before they can harm a business. MDI BSM includes existing software tools from HP's Business Technology Optimization for SOA suite, including software for SOA governance, quality, and management, as well as business process monitoring, change management, test management and optimization, and integrated incident management. The new offering also includes a range of services provided by the HP Service group. These include assessment, deployment, and integration expertise, as well as training for line-of-business users working with SAP applications and operations teams attempting to monitor and change business applications. The product's supporting services are focused on the needs of manufacturing and distribution companies, and components of the application, such as HP's Quality Center software, also include manufacturing- and industry-specific implementation methodology templates. Manufacturers that have service-enabled their enterprise applications can use the MDI BSM software tools and services to gain visibility into how well their systems and underlying business processes are working. The business process monitoring component is able to pull from BPM tools information about how specific business processes are supposed to operate.

Business Drivers

- Productivity
- Innovation
- Mobility

Key Areas of Spending

- PLM
- ERP
- SOA
- Manufacturing Intelligence
- Business Intelligence
- RFID
- Wireless technologies

Government

Government entities spend around 5.6 percent of their total budgets on IT. The top spending groups within Government are federal, at 8.1 percent, and state governments, at 8.2 percent, which have significant infrastructures to maintain, including social program, tax collection, records administration, military operations, and other IT-intensive elements. Government currently has the highest ratio of any sector of desktop PCs to notebooks (22:10), which demonstrates a lag in empowering employees with the tools of mobility. Thus mobility will make up a key spending area for the industry, as well as all the appropriate tools to safeguard valuable government information.

Federal information technology spending will continue to grow over the next five years, but at a much lower rate than during the past five years. A study that has recently been released by the Government Electronics and Information Association (GEIA), predicts that federal IT budgets will increase by an average of 1.4 percent per year from 2008 through fiscal 2013, down from an annual growth rate of 5.7 percent during the past five years. Growth will be slowed by changes in spending priorities and Iraq policy following the 2008 presidential election. Other complicating factors include more continuing resolutions, which generally keep down spending, plus increased oversight from Congress and the Office of Management and Budget (OMB). Growth will come from civilian agencies, as the new administration will likely increase domestic spending while decreasing funding for operations in Iraq. GEIA predicts that civilian agency IT spending will increase by a compound annual growth rate of 3 percent, which is in line with the projected increase in overall discretionary spending. Furthermore, the amount of money spent on developing, modernizing, or enhancing IT projects is predicted to continue sliding during the coming years, as agencies continue to direct money toward steady-state projects and work to fund the Bush administration's policies through 2011. Agencies will be focused in the success of the program that they currently have in place, so market opportunity can come in the form of maintaining legacy systems and keeping them up to standard.

If a new poll sponsored by Cisco is to be considered an accurate indicator of the opinions held by a majority of federal IT leaders, it appears that the security if the U.S. government's network infrastructure remains a serious problem; and if the survey is correct, they have become more worried of the state of government IT security from last year. Project leaders continue to feel as if they do not have enough time or funds to adequately address what they view as their most pressing network security issues. In a nod to the frustration that federal entities often face in terms of keeping their network security protections on the same level as their private industry partners, 67 percent of respondents cited that a lack of sufficient budget is their leading challenge. Behind budget, respondents ranked the high amount of user training needed to install new network security technologies (55 percent), and the need to give prioritization to other projects over network security improvements (53 percent) as the leading barriers to improving their standing. Among the technological issues that the respondents find most frustrating in advancing their efforts were a lack of collaboration among stand-alone products (50 percent), a shortage of integrated reporting tools in individual products (39 percent), and scarcity of proactive response capabilities. With government agencies notoriously under spending on innovative IT, and usually focusing more on maintenance, there is massive potential for growth with the development of technologies that can alleviate the above concerns. In terms of more traditional malware threats, botnet programs and spyware were cited as the leading problems with 56 percent of respondents listing the virus programs at the top of their concerns.

As for spending on the state level, total state IT spending will grow from $30 billion in 2007 to $42 billion in 2012, slowing a bit by 2009 as consolidation and modernization level off. State and local government, with flush budgets will increase spending proportionately to one another, with a compound annual growth rate of 6.6 percent. Whether ongoing programs or new initiatives, the key drivers of state IT spending remain the same: consolidation and integrations, with special attention being paid to security, privacy issues, and cost. Another key driver will be finding a way to make employees more efficient. If a way is found to do so, states will invest. Hardware purchasing remains conservative in state government, with legacy systems staying intact and few plans to rip and replace. Rather than an infrastructure overhaul, states will purchase computer equipment piecemeal. Additional attention on areas like disaster recovery by extension creates a need for robust, off-site storage facilities. Also, homeland security will drive sales of biometrics, radar, alerting, and video equipment. Input predicts contracted spending on computer equipment by state and local government to grow from $9.7 billion in 2007 to nearly $12 billion in 2012. Beyond consolidations, states will spend more on networking hardware that supports a transition to IPv6 and wireless technologies for the mobile workforce. Overall, solution providers that can offer an economic alternative to replacing systems will win opportunities. Furthermore, there is a serious need for more holistic solutions that reclaim storage space not being used effectively. Partly for that reason, states will invest more in software as they seek new ways to leverage existing technologies and streamline processes across agencies. States will be looking to consolidate and virtualize their infrastructures in a cost-effective manner. Input is predicting that the total contracted spending on software by state and local governments will increase from $6.1 billion to $8.2 billion over the next five years. Input further expects more demand for packaged disaster recovery solution that do not involve complex rollouts or major investments on the state level. VARs are in an especially good position if they can offer a temporary alternative to owning capabilities

Key Drivers:

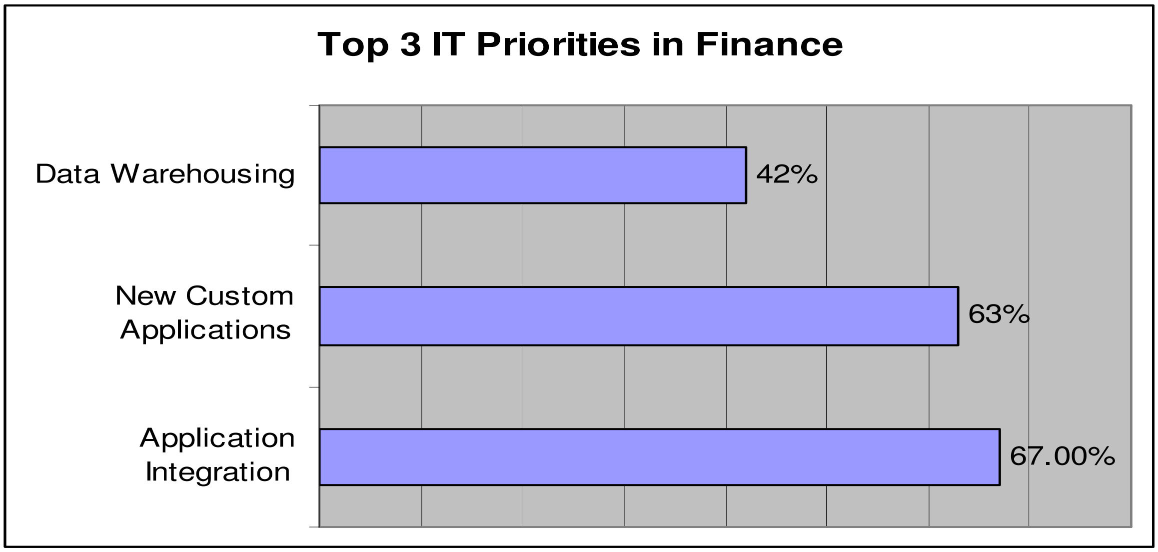
- Security
- Privacy

Key Areas of Spending:

- Security
- System Consolidation
- Legacy system maintenance

Financial Services

Within the financial sector, IT spending as a percentage of revenue is on the mark to be just below the mean at 5.5 percent. Within the industry however, there is considerable variability between segments. For instance the Credit Union/Savings and Loans segment has an unusually high spending level relative to total revenue, at 11.3 percent. In a recent survey, most industry sectors said that IT spending will increase 5 to 8 percent in the coming year with 43 percent of the IT budget being allocated towards new purchases, and a greater emphasis on IT governance.



Security spending is up as much as 15 percent over last year, at 11 percent. According to a Global Security Survey, the biggest spending hikes will be made in audit or certification costs, logical-access control products, infrastructure protection devices, and compliance and risk management. In a related trend, 81 percent of financial institutions surveyed said that they have adopted a formal Information Security Governance framework, up from about 70 percent last year. The vast majority of the remaining respondents said that they are in the process of establishing one. The higher adoption rate in formal Information Security Governance frameworks, which detail lines of authority and reporting requirements, business processes, technology, and security measures, appears due to increasing pressures of government regulations. Some audit obstacles that technology adoptions are trying to alleviate are networks that still allow excessive access rights, lack of adequate audit trails/logging, and failure to assure control complies with formal business procedures. Another compliance-driven opportunity is in Data Leak Prevention. Solution providers are moving away from pushing ad hoc compliance fixes, designed to meet a specific rule, in favor of a more common-sense approach. Implementing best IT practices and using automated tools such as asset management platforms often result in compliance as a natural consequence.

Sun Microsystems has recently introduced a new series based on its new UltraSPARC T2 processors. In addition to the new processors, the servers also feature a new Sun chip with eight floating point units compared to only one in the previous generation of the server family. The extra floating point operations are for financial institutions running Monte Carlo simulations, or whenever customers run security applications such as encryption. The SPARC Enterprise T5120 packs a single processor socked for either a four-, six-, or eight-core processor, as well as up to four hot-plug SAS hard drives, up to 64 Gbytes of memory, and three open I/O slots, all in a 1U enclosure. The SPARC Enterprise T5220 is similar, but its 2U enclosure has two extra I/O slots and room for four more hard drives. The third server is the Sun Blade T6320, a blade version of the T5120. All three include Sun's integrated lights-out management for monitoring networking, security, and authentication, which is found on all Sun's servers. They are starting to drive to common packaging and management wherever possible. Sun is also including a tool that will let customers who have not yet ported all their Solaris 8 applications to Solaris 10, run those applications in a virtual Solaris 10 container. This new line of servers could also be a way to introduce new customers to the Sun platform.

In addition, IBM is staking out a major new source of business helping clients, such as banks, manage data centers on a par with Internet players. The initiative is to set up customers with the technology, software, and services to operate data centers. IBM has dubbed its new venture "Blue Cloud" and works of the trend of "cloud computing," which is used by Internet powerhouses to array huge numbers of computers in centralized data centers to deliver Web-based applications to users, rather than making their customers run such programs on their local machines. IBM's particular focus is taking these standards of Internet computing and bringing then to the mainstream in the commercial world, in turn capturing more market share in managed services. The basic idea is to make corporate data centers operate more like the Internet by enabling computing to be spread out across a large, distributed pool of computers, rather that on local machines or remote server farms. Although this may have an impact on server sales, it will not be in the immediate future. Cloud computing lets organizations switch resources to where they are needed, virtually gaining access to computers and storage on demand. In contrast, the older approach of running individual applications on separate servers means as little as 10 percent of a stand-alone computer's capacity is used. As part of the strategy, IBM will offer services and products that allow customers to implement "cloud computing" strategies of their own, rather than forcing them to rent space in other data centers and risk exposing vital business secrets. Companies are currently struggling to pack more computers into cramped data centers while trying to cope with surging energy costs and electricity demands, so this will aid in data center proficiency.

Furthermore, after years of cost cutting and indifference to customers, many banks now see customer focus as a way to differentiate themselves from the competition. Thus, they have become the number one vertical in the CRM market, according to IDC. The financial services industry has had an increasingly strong need for simplified integration and business agility which benefits SOA, especially when it involves legacy platforms they may need to maintain for a few more years. Not only that, but much of banking is in common core transactional services like opening accounts. Vendors like IBM insist SOA is compatible with mainframes, which are still quite common in the finance industry.

Customer-oriented innovations are also driving an increase in IT spending by financial services firms, a recent study into the industry's technology trends has revealed. A recent report by TowerGroup predicted that investments in new and replacement technology by retail banking, insurance, securities and investments firms would grow at a rate of 8.9 percent between 2007 and 2010. The rise in spending was due to firms using IT to grow their businesses in response to pressures of rationalization, innovation, and globalization. Shifting customer perceptions are recognizing the advantages of real-time, multi media, direct access services. Surges in electronic transactions bring a quest for speed, scale, and connectivity, while new and innovative products and services call for investments in new technologies. Furthermore, research indicates that the surge in technology spending was being driven by investments in business intelligence and customer management technologies, in addition to updating legacy systems in order to handle more transactions in real time. We will be seeing an increased focus on customer retention/acquisition, cost income ratio, cross-asset selling and algorithmic trading. This is driving the need for systems initiatives, which include grid computing, new datacenters, server virtualization, low latency processing, middleware integration, and business intelligence.

Top 10 IT spending trends in financial services:

1. Business and customer intelligence
2. Business Process Management
3. Risk and Compliance
4. Data Governance
5. IT governance and systems rationalization
6. Low latency and straight-through transaction processing
7. Information Security
8. Predictive analytics
9. Internal and external service oriented architecture hubs
10. Multimedia over broadband

For financial institutions, the challenge is not only to develop an intimate understanding of customers, but also to ensure that every customer touch point is connected as a part of holistic, end-to-end process that is highly personalized, yet delivers maximum efficiency and consistency to enhance the customer experience and increase their value to the enterprise. In practical terms, it is about developing rich integration between all customer data, processes, and communication channels to ensure that at any point in a customer interaction, the company representative can respond effectively to their needs. Even more than that, it means driving profitability by streamlining and automating processes to improve efficiency, consistency, and repeatability while reducing administrative costs. This approach, known as Customer Process Management (CPM), represents a merger between CRM and BPM. This approach maintains a customer-centric focus of CRM, but extends its value right across the enterprise and beyond by maximizing process efficiency and responsiveness to improve manageability and reliability. By tying together every customer process and placing control of those processes into the hands of business users, CPM enables financial services organizations to adapt quickly and easily to changing market demands to maximize their competitive edge. CPM effectively supports initiatives to win and retain customers, increase profitability, improve customer loyalty and at the same time, maximize efficiency to cut costs.

Business Drivers

- Compliance
- Security
- Risk Management

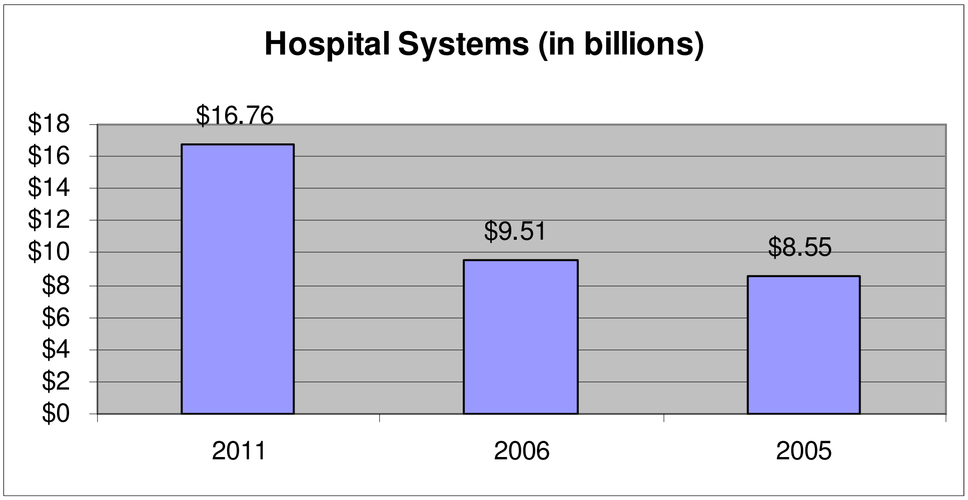
Key Areas of Spending

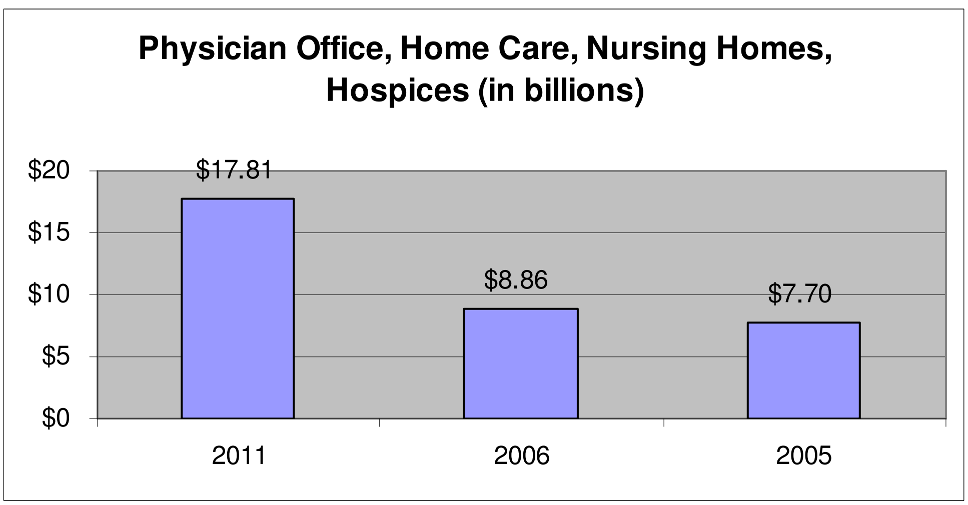
- SOA
- Security Governance framework
- BPM
- Business Intelligence

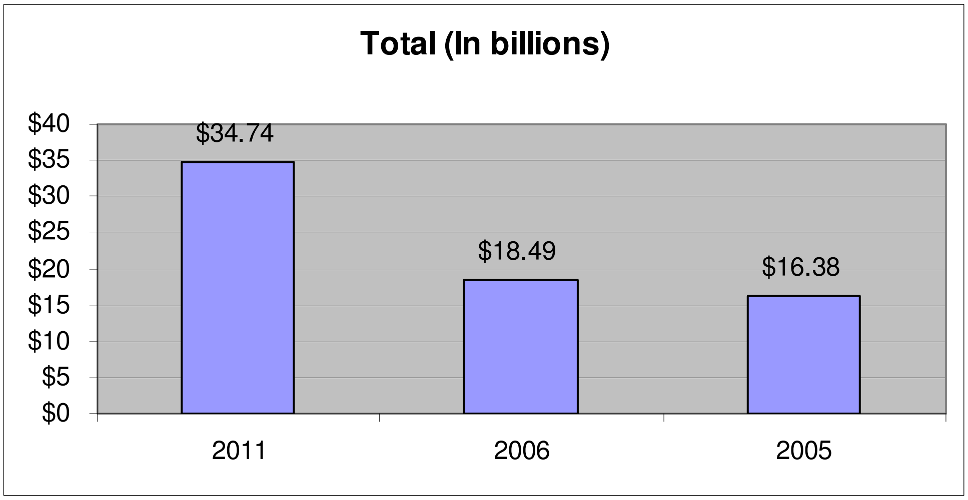
Healthcare/Life Sciences

Within the healthcare sector, healthcare providers are projected to spend as much as $27 billion on Information Technology in 2008, according to research by Datamonitor. Care providers and payers within the U.S. are accelerating their spending on IT, largely driven by national initiatives toward electronic medical records adoption by 2014. Physician practices will fuel much of the anticipated 7.5 percent compound annual growth rate. Hospitals have been at the center of healthcare IT adoption and will continue to embrace information technology, with an increasing number of medical groups to continue to come on board over the next few years. With major employers, providers, payers, IT companies, and associations making announcements of personal health record, or PHR, initiatives, it is no surprise that this will be the most important trend of 2008. A very distant second is the trend of tentative steps toward personalized medicine, such as the one spearheaded by the Mayo Clinic. Additionally, advances in e-prescribing ranked third, followed by RFID applications to battle against counterfeit drugs in fourth place.

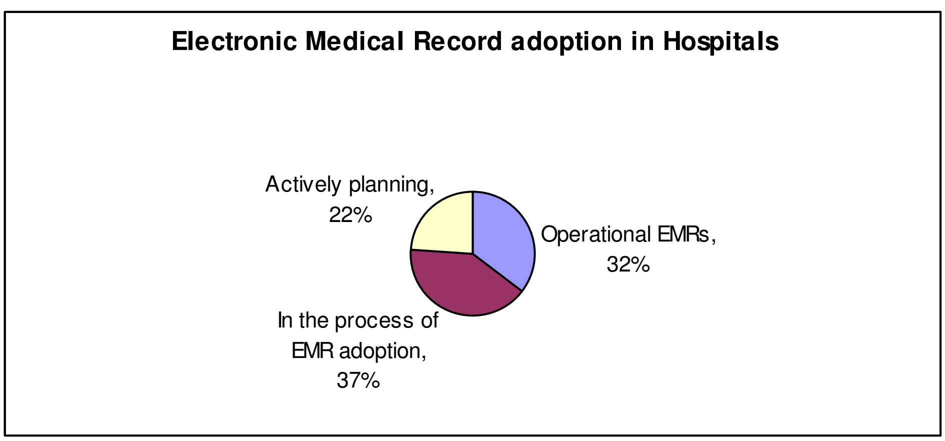
Forecast for U.S. Health-Care IT Market:







Health Industry Insights estimates that U.S. hospitals spent about $15.5 billion on hardware, software, and IT services in 2007, while physicians' practices and other ambulatory care providers spent around $3.6 billion. This is projected to grow at least 7 to 8 percent a year for the next several years. Of a combined outlay of $19.1 billion, about $5.5 billion is spent on clinical systems, which includes electronic medical record systems (EMRs) and the applications that contribute to them. Healthcare solution providers have high hopes that the market will continue to mature quite rapidly. Any Value Added Reseller (VAR) or integrator who has doctors' offices, health clinics or hospitals as clients is a good candidate to offer EMRs. Often such solution providers began by offering general IT and networking, then were drawn into reselling practice management software as healthcare clients began automating their scheduling and billing processes. EMRs, though, require more involvement by and commitment from healthcare practitioners themselves. Medical records systems may require the doctor to enter patient information, so this can mean a longer sales cycle and a greater investment of both time and money. However, the investment will be well worth it, enabling more comprehensive and accurate patient care. Large hospitals are leading the way in EMR adoption. Recent surveys by the Health Information and Management Systems Society (HIMSS) indicate that 32 percent of hospitals now have operational EMRs, 37 percent are in the process of implementing that and 22 percent are actively planning them, leaving ample opportunity for solution providers to capitalize on the market.



The greatest opportunity for solution providers is in local physicians' practices and smaller institutions. Estimates vary, but the consensus is that fewer than 15 percent of all physician practices have any form of EMR, and only 5 to 10 percent of the smaller practices do, according to Health Industry Insights. With minimal adoption in this market segment thus far, they are poised and ready to adopt the technology. Currently, there is acceleration in the adoption of EMRs by physicians, and it is predicted that over the next three to five years, as many as 15,000 practices a year will purchase an EMR solution. A number of converging factors should drive the market over the next several years, particularly the growing pressure from the federal government and insurance companies to adopt EMRs. Furthermore, a relatively recent change in law, with the Stark Law amendment, could encourage hospitals to help local physician practices to use EMRs. The amendment now allows hospitals to donate funds, software, hardware, and services to private practices that setup EMRs, which has increased the level of interest. To get around cost barriers associated with EMR adoption, some vendors have started to offer EMRs as a web-based service. These companies have low up-front costs and charge a monthly service fee. Another emerging model consists of large practice associations that are forming their own IT service companies and negotiating bulk buys from vendors. They then help individual practices with the technology. Simultaneously, doctors, hospitals, and solution providers are busy focusing on updating their practice management to meet national ID provisions in HIPAA. For the past year or more, IT budgets have been focused on complying with those requirements, so not much attention or financing has been allocated to EMR adoption. The aforementioned factors may mean that the EMR market may not hit its full potential for another 3 to 5 years, but when it does, those vendors and solution providers who have prepared accordingly may find themselves in a lucrative market.

Of course, security and privacy remain top priorities in 2008. Within the highly regulated healthcare industry, where privacy issues are a main concern, there are signs that interest in Data Leak Protection (DLP) technologies are spreading. DLP represents another compliance-driven opportunity for solution providers. Most healthcare providers are going to make these types of investments because they see the benefits of having more secure, better-managed, and more efficient IT systems.

The healthcare industry has also begun to jump on the virtualization wave in order to help cut operational costs. While diagnostic and therapeutic tools are decidedly high-tech, healthcare has not always made the best use of IT resources to manage patient information and operations. So in recent years, it has become typical for healthcare organizations to suffer from explosive growth in size of server farms, with all the problems that implies. Now the trend in healthcare will be to bring in more systems to support patient care, and to see more new projects than ever before. In a recent study conducted by Hewlett-Packard, consultants found that healthcare server environments are not being utilized properly, with average server utilization being just about 7 percent. Virtualization will allow healthcare IT staff to run multiple virtual servers on a single physical box, and to allocate resources as needed to optimize performance without wasting resources. Furthermore, a key tool that will enable continuous assessment of performance is that of HP's OpenView Performance Insight and it is specifically designed to help customers optimize their infrastructure. In retrospect, IT investments such as virtualization and server consolidation will only add to operational cost savings in the long run depending on the consolidation ratio. The consolidation also addresses the hot topic of power and energy conservation and cooling issues. The HP BladeSystems maximize performance density, and feature a Dynamic Power Saver feature for efficient power usage and cost savings.

Business Drivers

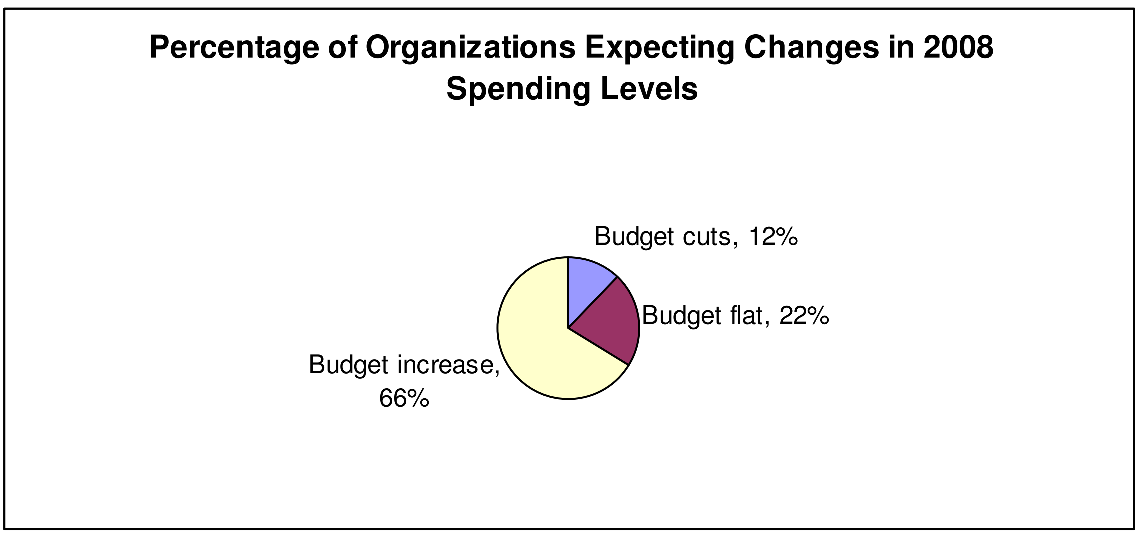
- Privacy
- Compliance
- Security

Key Areas of Spending

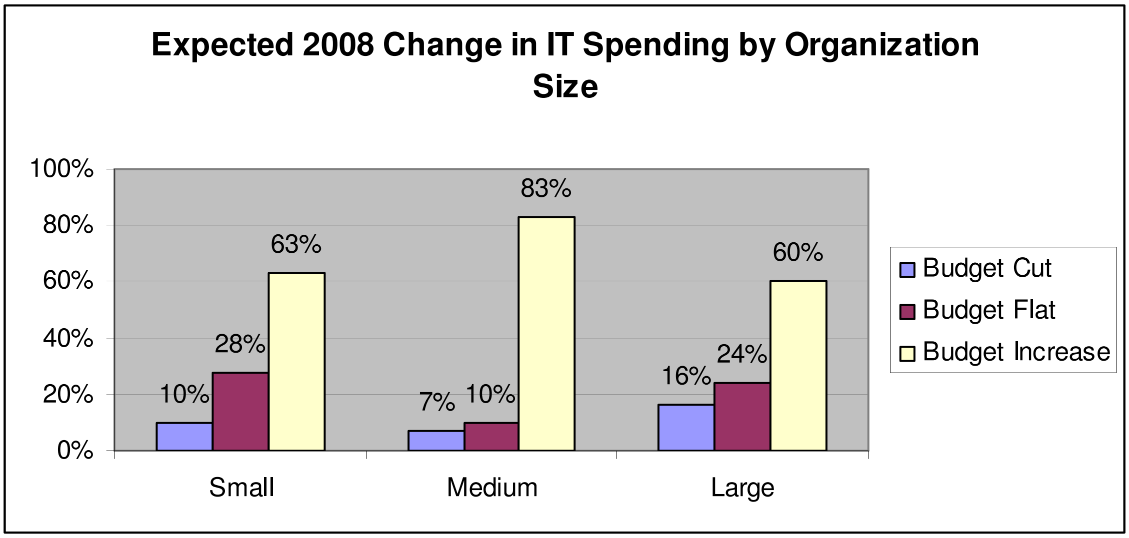
- Federal e-health initiative
- System Maintenance
- Business Intelligence
- Federated Identity Management
- Storage

Industry Growth/Contraction Trends - Business Segment Spending

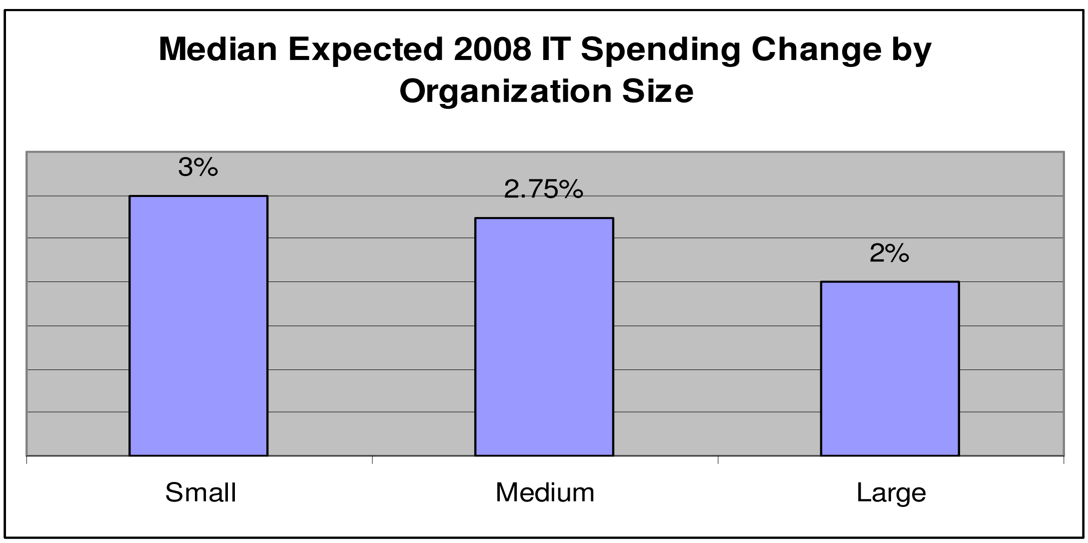
As 2008 commences, technology spending expectations by business organizations are modest at best, especially among larger organizations. With an uncertain economy, and possible recession looming, IT investments are going to be approached with caution. Even with a possible economic downturn, what is being seen is that a majority of organizations are expecting to increase spending levels in the new year.



However, large organizations show a more conservative outlook. Among large companies, only 60 percent expect their IT budgets to increase, while 16 percent are actually expecting budget cuts. Furthermore, only 10 percent of small organizations and 7 percent of midsize organizations are expecting budget cuts.

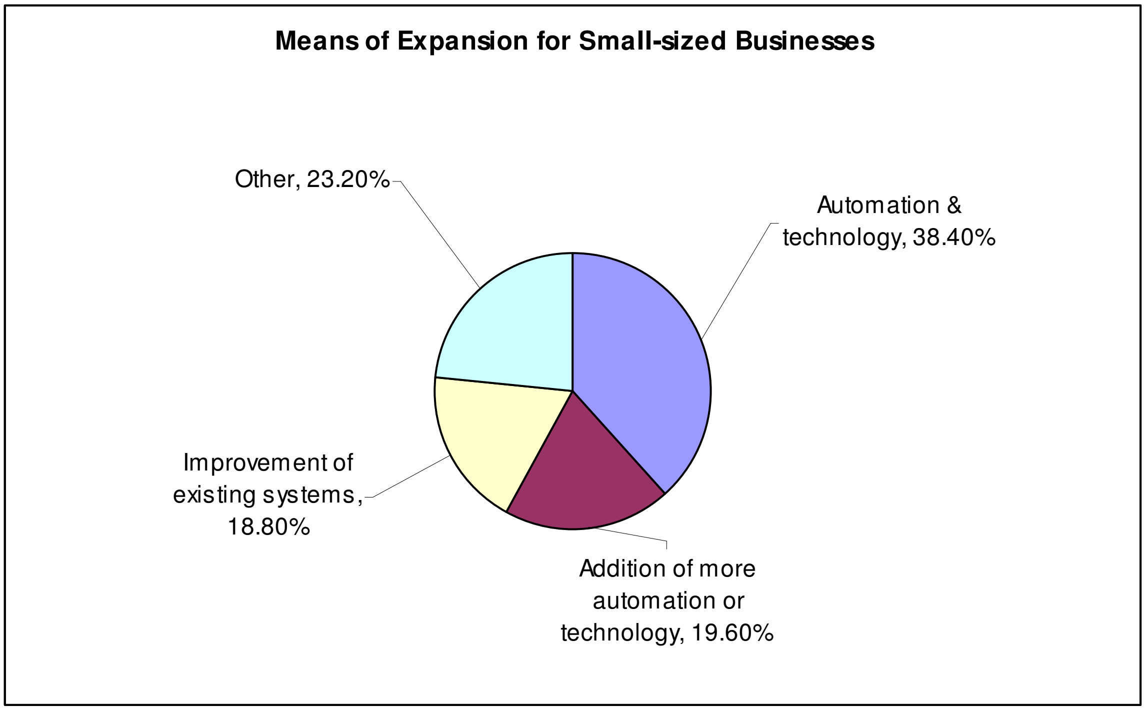


Even though a large percentage of organizations are citing budget increases, based on information gathered in a recent survey by Computer Economics, the median percentage increase for the sample is a modest 2.5 percent. Though positive, these expectations are conservative and well below the 5 percent increase that was seen in 2007 budgets over the previous year. In fact, if these expectations are accurate, 2008 will show the lowest level of IT spending increase since 2004. Large organizations continue to have the most conservative spending increase expectations. Large organizations at the median are expecting to increase IT spending by only 2 percent, while midsized organizations at the median expect a 2.75 percent increase, and small organizations at the median projecting a 3 percent increase.



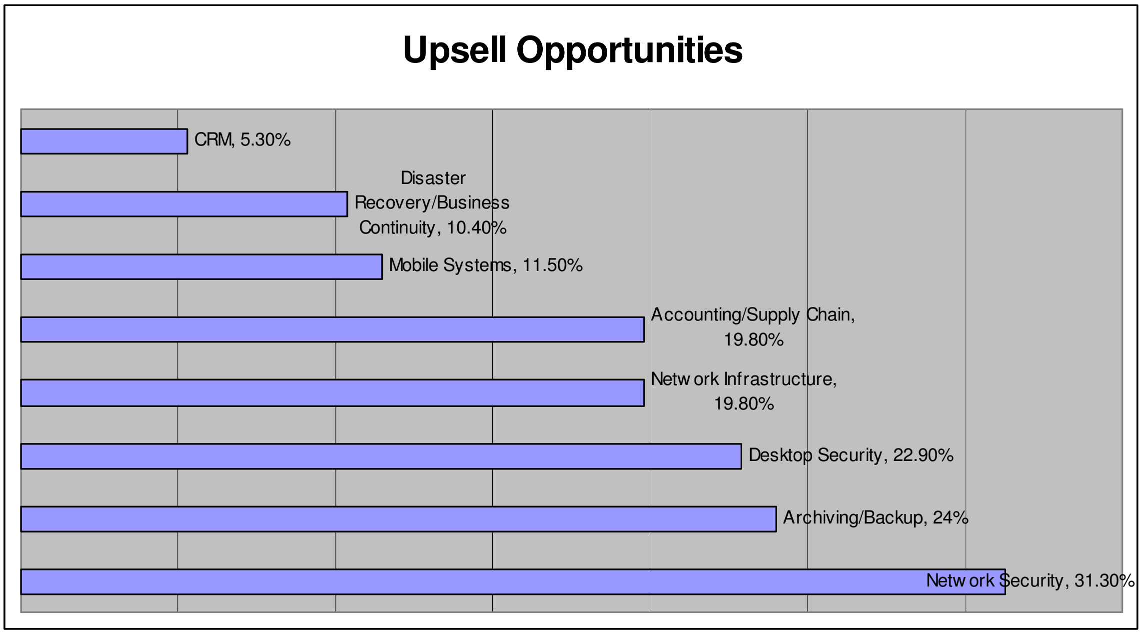
The ability to fund increases in IT spending levels in 2008, however, depends primarily on the overall health of the economy. Therefore, understanding the economic conditions will be helpful in understanding the spending outlook for 2008. Research indicates that IT executives have already scaled back their expectations for IT spending increases in 2008. If economic conditions do worsen, it can be expected that median IT spending increase in 2008 will be flat compared to 2007. For the meantime though, widespread spending cuts are unseen and the recommendation for 2008 is to create two separate budget plans. The first should reflect the same kind of marginal growth prepared during the past six years, and the second budget should assume the need to cut costs in response to the arrival of a possible recession.

Small to Mid-sized businesses (SMBs) will continue to be where solution providers and vendors will focus their energies. With these businesses poised to continue wide-spread adoption of many software and hardware applications, many solution providers have seen the immense opportunity and have begun to customize applications specifically for SMBs. In a recent survey of small businesses, conducted by CRN, more than one third of small businesses are planning to expand through technology as their prime method of planned productivity enhancement.



As a matter of fact, the SMB market segment is the only segment that is really the exception to the budget woes of other markets. In a recent survey conducted by the Computer Technology Industry Association, 45 percent of companies with fewer than 1,000 employees are expecting their businesses to grow at least 10 percent over the next 12 months. Furthermore, 21 percent expect growth to exceed 20 percent, and 90 percent of them plan to also hire new full-time employees during this same period. With increased growth in the foreseeable future, employers will be purchasing the appropriate technologies for their new additions. The technologies that SMBs expect to invest in during 2008 are: secured data backup, disaster recovery, server virtualization and consolidation, Wi-Fi, and storage solutions. Although budgets will be tight, and IT is usually less considered in the overall budget, the situation is improving. A majority of small businesses surveyed are planning to increase IT expenditures, especially over the next 12 months.

Also, 62 percent of small businesses polled strongly agree that technology is something that can create a genuine competitive advantage for an organization. That statement alone is incentive enough for solution providers to show their small-business customers how technology translates to a competitive advantage. Those companies that are planning on increasing spending expect to spend an average of about $13,000 on IT equipment over the next year. Companies within the segment have highlighted five technology categories where they have sought or received help the most from solution providers: network security, archiving and backup, client and desktop security, network infrastructure, and accounting and supply-chain applications. These five areas currently present key opportunities for upselling in the SMB market.



The popularity of emerging vendors highlights a growing trend in the SMB market. The focal point of the SMB market is comprised of massive opportunity for vendors, and the smaller vendors are proving to be more capable of providing programs and systems that are in line with SMB budgets. The emerging vendors recognize that power and are battling hard to win solution providers' selling power. They are reshaping the information technology industry, solution providers say, by handily beating established vendors in head-to-head product, margin, technical support and field engagement comparisons. Solution providers are saying that these emerging technology dynamos are blowing away the larger vendors on all the aforementioned fronts, and more. This year's class was made up of 163 new vendors, up from 75 last year. In addition the percentage of solution providers polled by CRN who said that they were adding an emerging vendor is up from 57 percent last year to 72 percent this year. Furthermore, these emerging tech vendors are delivering a greater share of their profits as they look out over the next five years. Emerging vendors are becoming more important because of their ability to be cutting edge. The larger companies' resources are pulled in many different directions, so it may be difficult for them to be true innovators. One crucial aspect to the success of these emerging vendors is their ability to provide stellar support. Solution providers say the technical support they get form emerging vendors versus the larger, more established vendors is like night and day. The emerging vendors are far more personal and hands-on. Solution providers get instant access to top notch technology talent. The pricing that is provided by these vendors is right in line for SMBs, and this is filling a technology gap that has many emerging vendors making their mark with solution providers. It is also a sharp focus on designing, building, and pricing products specifically for the SMB customers. When an emerging vendor develops products for the small-business slice of the market, for example, they are mostly focusing on 50 users or less. Those products are built and priced for that segment at thousands of dollars below comparable solutions from larger vendors.

Some solutions have recently been introduced to the market that are in line with SMB priorities, and are within reach of adoption within the segment. When it comes to storing data, small to mid-sized companies are looking for specifically designed solutions at affordable prices, centralized management, scalability, and well-trained, support-intensive solution providers to design, implement, and maintain this critical part of their business. To fill that need and attempt to capitalize on the market, EMC, HP, Hitachi Data Systems have designed storage products to meet these requirements. With a sizeable amount of SMBs projecting expansion and growth in the next 12 months, they now will require more storage and more storage services. Dissatisfied with the watered-down versions of enterprise offerings, these customers are excellent prospects for market-specific solutions. Within midsized companies specifically, they are using a gamut of technologies, such as external disk arrays, network attached storage, SANs, tape, blade storage, and virtualization to solve their storage dilemmas. It is estimated that midsize companies will spend about $6 billion on external disk storage alone by 2011. When considering a storage purchase, midsize customers typically hone in on issues such as return on investment, technological obsolescence, ease of deployment and use, scalability, and business continuity. The solution being offered by HP, the HP StorageWorks All-in-One (AiO) SB600c Storage Blade which works on both its new “Shorty” BladeSystem c3000 and the existing BladeSystem c7000. The blade storage concept benefits midsize customers, HP believes, due to its flexibility, ease of use, and modest cost. The new unit provides shared storage for application servers and enhanced storage for file serving, along with application-centric software for storage management, at the same time fitting into an energy- and space-efficient blade enclosure.

Hitachi Data Systems has released a portfolio of enhancements across its midrange storage line to address concerns about rising energy concerns and the need for heightened security. A new Power Savings capability for the AMS and WMS midrange lineup enables customers to power down volumes or disks when they are not being accessed by the business application, and can be powered up quickly when the application requires it. EMC has also introduced its CLARiiON CX3-10 UltraScale networked storage system and EMC RecoverPoint/SE software for networked-based asynchronous replication in midtier storage environments. To meet the needs of companies deploying network storage for the first time, the systems includes iSCSI SAN connectivity for applications, as well as a Fibre Channel for more bandwidth-intensive applications. EMC is also offering three solutions designed to help midsize businesses consolidate, back up, archive, and protect Microsoft SQL Server 2005, Microsoft Exchange 2003, and Oracle RAC 10g environments. With manufacturers expected to continue to invest in midmarket-specific storage, solution providers’ ability to deliver customized yet affordable solutions will only increase over the near and long term.

Business Drivers

- Globalization
- Compliance

Key Areas of Spending

- Encryption
- Hosted VoIP
- Business Intelligence
- ERP
- CRM

References

2008 IT Spending Outlook: Anemic Growth (2007, November). www.computereconomics.com.

Aitoro, Jill R. (2007, July). State of the States: Our Annual Guide to State Government Technology Spending and Trends. www.crn.com.

All, Ann (2007, November). No Bull, SMB Bullish on Business Growth in '08. www.itbusinessedge.com.

Bain, Ben (2007, October). GEIA: Several Factors to Keep Fed IT Spending Down. www.washingtontechnology.com

Brousell, David R. (2007, December). Manufacturers' Confidence in US Economy Drops, a New MA Poll Reveals. www.managingautomation.com.

Cane, Alan (2007, December). What's on CIO Wish List? Digital Business Newspaper.

CompTIA (2007). Information Security Spending in the Rise, CompTIA Survey Reveals. www.comptia.org.

DeMarzo, Robert C. (2007, November). Get Set for IT Spending Wave. www.crn.com.

Diana, Alison (2007, December). Selling the 'M' in SMB Storage. Channel Advisor Magazine.

Enrado, Patty (2007, December). Top Trends: PHRs to continue to advance in 2008. www.healthcareitnews.com.

Harbert, Tam (2007, December). Rx for Healthcare: Electronic Medical Records. Channel Advisor Magazine.

Hines, Matt (2007, November). Federal IT Pros Insecure Over Security. www.infoworld.com.

Hogan, Hank (2007, October). IT Spending Trends Show Hardware Down, Software Up. www.systeminetwork.com.

Info-Tech Reports (2007, November). Info-Tech Reports-Financial Services. www.itbusinessedge.com.

Info-Tech Reports (2007, November). Info-Tech Reports-Government. www.itbusinessedge.com.

Kanaracus, Chris (2007, November). Sun Makes Play Against VMware. www.cio.com

Kanaracus, Chris (2007, December). IT Spending to See Slow Start in 2008, According to New Survey. www.cio.com.

Kovar, Joseph F. (2007, October). Sun Look To SPARC Its Server Sales. www.crn.com.

Kovar, Joseph F. (2007, October). HP o Secure Encryption Keys With New Appliance. www.crn.com.

Kovar, Joseph F. (2007, November). Blade Server Sales to Explode. www.crn.com.

Longwell, John (2007, December). Clarifying Compliance. www.crn.com.

Maxcer, Chris (2007, December). IBM Number One in Server Sales Despite Revenue Decline. www.systeminetwork.com.

Messmer, Ellen (2007, October). Financial Institutions Spending on Security, Governance. www.infoworld.com.

Morejon, Mario (2007, November). Drive Plays Well in Enterprise. CRN Magazine.

Pizzi, Richard (2007, December). WEDI, NCHICA Release Regulatory Timeline Database. www.itbusinessedge.com.

Poeter, Damon (2007, November). IBM Puts Power6 in Blade for the First Time. www.crn.com.

Reuters (2007, November). IBM In Big Push to Build Data Centers for Clients. www.crn.com.

Ricadela, Aaron (2007, December). 2008 IT Outlook: 'Less Than Comforting.' www.businessweek.com.

Sacco, Al (2007, October). Report: Hackers to Target Web 2.0, Mobile, RFID Technologies in '08. www.cio.com.

State of Technology (2007, November). Business Software. www.itbusinessedge.com.

The Info Pro (2007, October). Spending Levels of Large Enterprises Continue to be Strongest for More Expensive RISC-based Servers. www.businesswire.com.

Top 10 Security Threat Predictions for 2008 (2007, December). www.crn.com.

Weil, Nancy (2007, December). IT Spending to Slow in 2008. www.pcworld.com.

Zarley, Craig and Lawinski, Jennifer (2007, October). Blade Server Battle Looms as SMB Market Takes Off. www.crn.com.

Zelten, Patrick (2007, December). Companies Expected to Proceed with Caution in '08 IT Spending. www.itbusinessedge.com.